SEEDS Standards and Interfaces Process Study Task

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Purpose of Study

- **Define a process that enables the Earth Science Enterprise to make decisions on the development, adoption, evolution and maintenance of standards and interfaces for data and information systems and services.**
  - ESE programs, projects, user community and stakeholders must be involved in the definition and execution of the process.
  - Process should capitalize on the methods and experience of existing relevant data systems standards bodies (e.g. ISO, OGC, FGDC), NASA programs (e.g. EOSDIS, ESIP Federation) and other federal and international agencies (NOAA, USGS, ESA, NASDA, etc.)
- **Study should also define set of potential activities that the ESE can undertake to support the standards and interfaces process.**
  - Activities could include documentation, training and consultation services and the development and maintenance of standards-based tools.
  - The plan is to fund such activities through openly competed awards.
- **While the information-gathering phase of the study is underway, the process definition and execution phases will depend on the results of the other study teams, especially the levels of service.**
  - Standards and standard interfaces will only be established to solve specific and well-defined problems.

Study Approach

- **Form a team -**
  - Draw representatives from the ESE data systems and science community to manage the study subtasks and integrate the results.
  - Augment the team with consultants who can contribute to specific subtasks.
- **Gather background information -**
  - Develop an outline of survey topics and identify and survey applicable projects and standards organizations.
  - Also review NewDISS Pre-formulation Document, ESIP Federation interface table, results of Near-Term Standards study and other pertinent source material to identify candidate standards and standards processes.
- **Analyze results -**
  - Summarize and characterize the survey findings.
  - Compare with current vision and needs.
- **Propose next steps -**
  - Develop options for ESE to implement a standards specification and maintenance process.
  - Define set of activities that support the selected processes.
- **Throughout the study tasks, iterate results with the general ESE community via workshops and white paper reviews.**

Status

- **Team has been formed:**
  - Jean Bedet, SSAI, Study Team Coordinator
  - Helen Conover, University of Alabama, Huntsville
  - Yonsook Enloe, SGT
  - Allan Doyle, International Interfaces, Inc.
  - R. Suresh, Mayur Technologies
  - John Evans, GST
  - George Percivall, GST
- **Initial set of consultants have been identified:**
  - Jim Frew, UCSB
  - Silvia Nittel, University of Maine
  - Liping Di, GMU
  - Lola Olsen, NASA/GSFC
  - Doug Nebert, USGS/FGDC
  - Howard Diamond, NOAA
  - Mike Folk, NCSA
  - Chris Lynnes, NASA/GSFC DAAC
  - Doug Jaton, USGS/EDC DAAC

Status (continued)

- **Draft "Standards and Interfaces Survey Report" completed.**
  - Summarized activities and accomplishments of several ESE projects and relevant standards organizations.
    - Projects: EOSDIS Version 0, EOSDIS Core System, ESIP Federation
    - Organizations: ISO TC 211 Geographic Information/Geomatics, Open GIS Consortium, W3C, CCSDS, FGDC, IETF
  - Captured information in a standard format
    - Projects: Description, Metadata Standards, Catalog Interoperability Standards, Data Access and Interoperability Standards, Data Format Standards, Data Exchange Standards, Standards in Progress and Recommendations
    - Organizations: Description, Standards Relevant to ES, Standards Work in Progress, Standards Process, Success/Failure, NASA Current Involvement and Recommendations
  - Internal review of the draft document underway
    - Have identified additional projects to include in survey such as SeaWIFS, GeoConnections/Canada, NOAA Data Server and possibly ENVISAT (not to be exhaustive but to broaden perspective)
- **Review and analysis is forming foundation for next steps.**

Next Steps

- **List of candidate standards and interfaces being generated**
  - Drawing from survey report, will incorporate results of Near-Term Standards Study team and will be structured around "as is" functional architecture.
- **Need to move into analysis phase**
  - Identify most important, relevant standards and standards activities
  - Compare and contrast standards processes
    - Cost, time to define/approve, complexity
    - Top down vs. bottom up
    - Characterize best practices
  - Begin to define potential ESE standards processes and activities
    - Possibly different process for different interface categories
    - Community involvement in definition and approval of standards
    - Mechanisms to promote use of standards
      - RFP language
      - Incentives such as $ or tools
    - Role of prototyping in standards development or promotion
- **Goal is to have process options drafted by the next workshop and a plan in place by end of fiscal year.**

Our Workshop Objectives

- **Get feedback on what we've done and plan to do**
  - Suggestions for team members and consultants
  - Other projects/organizations to include in survey
  - Additional subtasks that we should be pursuing
- **Share your experiences in the areas of standards and interfaces**
  - Characterize your role within the Earth Science Enterprise…are you a consumer or provider of data, information and services or do you do both?
  - Where have standards and standard interfaces improved your access to data, information and services or improved others access to what you provide?
  - Where have they been an impediment?
  - How might the ESE and its programs and projects improve upon past performance?
  - Have you had any direct experience with standards development or with formal standards bodies…what is your assessment of their success/failure?
- **We welcome any and all input!**